



Natural Resources and
Environmental Protection Cabinet

Generic Groundwater Protection Plan: Residential Septic Systems

HOMEOWNER'S SEPTIC SYSTEM GUIDE AND RECORD KEEPING FOLDER

The purpose of 401 KAR 5:037 and this groundwater protection plan is to prevent groundwater pollution. Understanding how your septic system works and following good operation and maintenance practices are the keys to preventing groundwater pollution.

This folder provides you with that information. By carefully reading it and following the guidelines, you will not only protect groundwater, but also should receive many years of trouble-free service from your system.

FOR YOUR RECORDS

Keeping records will enable you to better protect and maintain your septic system. In case you sell your house, your records will show a prospective buyer that your system has been properly maintained.

What to keep?

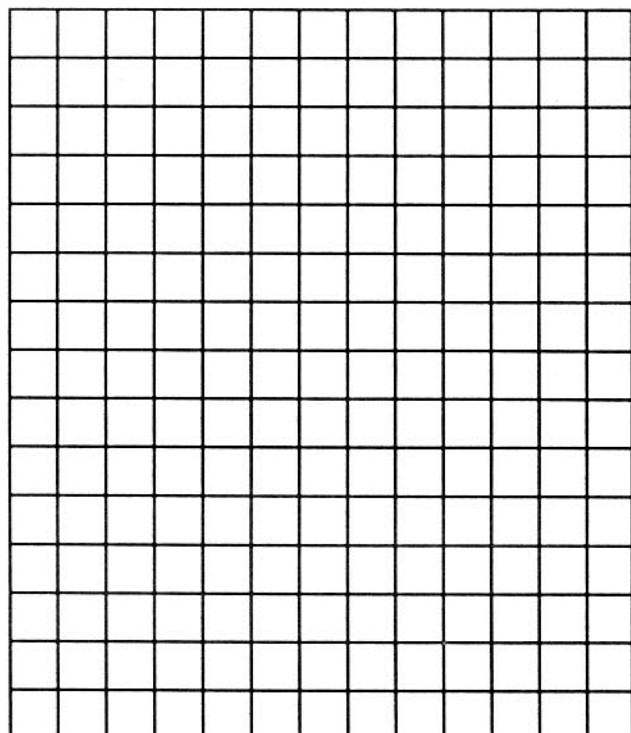
1. Maintenance Log: Date, what was done and reason for the maintenance (Example: measure sludge and scum layers, pump the tank).
2. Inspection Log: Date, what you observed upon walking over the septic system (Example: any unpleasant odors, soggy soil, lush green grass over the lateral lines, surfacing wastewater).
3. Site Drawing: Show accurately the layout of the system on your lot. Include exact distances of each portion of the system from at least two (2) fixed reference points (corner of house, garage, large trees, property line markers).
4. Any permits or receipts.
5. Residential Address _____

Septic system type:

_____ Septic tank - drainfield
_____ Septic tank - constructed
wetland - drainfield
_____ Septic tank - leaching
chambers

_____ Septic tank - low pressure pipe
_____ Septic tank - sewage lagoon - drainfield
_____ Septic tank - gravelless pipe

Sketch System Layout Here



System Inspection Log

DATE	DESCRIPTION

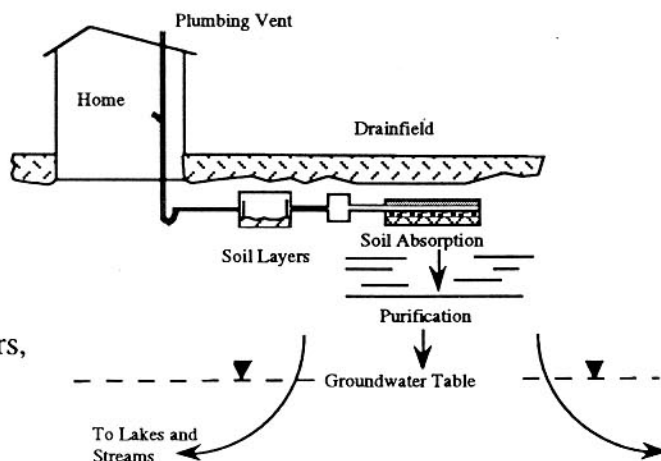
System Maintenance Log

DATE	DESCRIPTION

SYSTEM DESCRIPTION

A septic system uses natural processes to treat and dispose of the wastewater in your home. It typically consists of a septic tank and a drainfield (also called a leachfield, lateral field, or subsurface soil absorption beds/trenches).

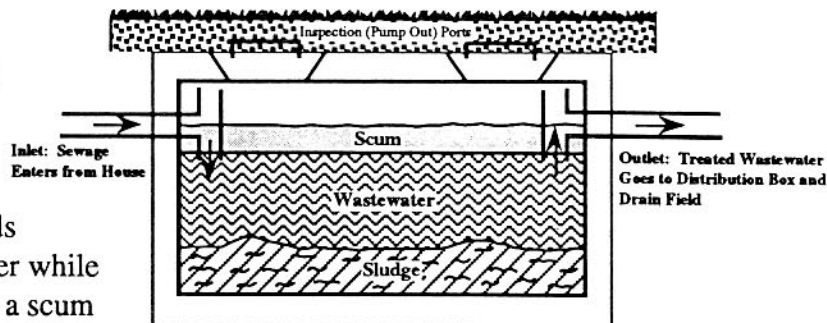
The system accepts both “blackwater” (toilet wastes) and “greywater” (wastes from the kitchen sink, bath tub/showers, and laundry). Water that should not be discharged to the system includes water from foundation or footing drains, roof gutters, and other “clear” water.



Basic System

SEPTIC TANK

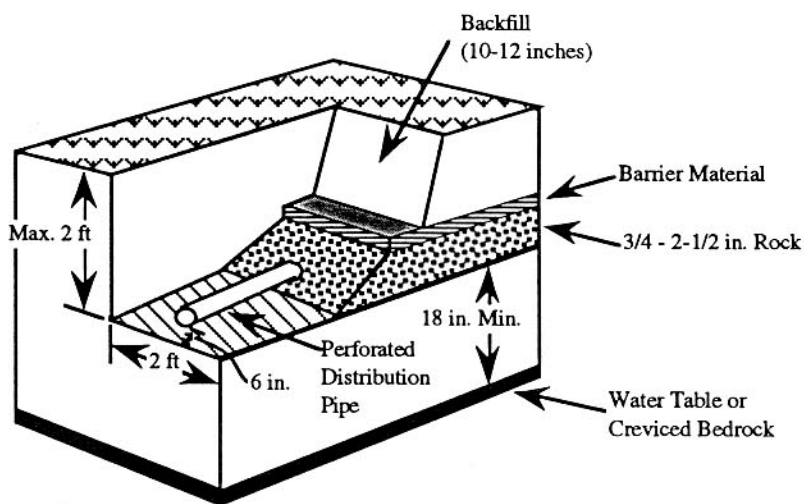
The septic tank provides the first step in treatment by separating the solids from the liquids. The wastewater is retained in the tank for 24 hours or more. During this time the heavier solids settle to the bottom to form a sludge layer while the lighter solids float to the top to form a scum layer. Bacteria break down the solids, producing carbon dioxide, hydrogen sulfide, and other gases in the process. These gases are vented through the plumbing vent on your house roof. Since the bacteria reduce only about 40 percent of the sludge and scum volume, the tank must be pumped regularly (approximately every three to five years) to remove the accumulated solids. If the tank fills with sludge and scum, the solids will overflow into the drainfield and quickly clog the soil, resulting in system failure.



Septic Tank Cross-Section

THE DRAINFIELD

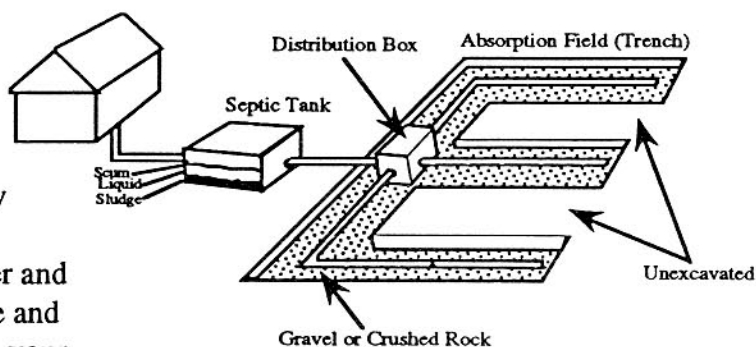
The drainfield provides the final treatment of the wastewater and disposes of it through groundwater recharge. The typical drainfield is composed of trenches or beds which are shallow, level excavations installed one to one and a half feet above the groundwater table. Each trench contains a perforated distribution pipe through which wastewater drains into the gravel. The water is stored in the gravel until it can seep into unsaturated soil underlying and adjacent to the trench. As the wastewater moves slowly through the gravel and soil, many of the disease-causing bacteria and viruses are filtered out, or adsorbed and held by the soil particles until they die. Where soils do not permit a drainfield to adequately treat septic tank effluent, an additional or alternative treatment system must be used in conjunction with the drainfield. Alternative systems primarily used in Kentucky are constructed wetlands and sewage lagoons. These alternative systems have their own operation and maintenance guidelines. If you would like information about these guidelines, contact the Groundwater Branch.



Conventional Rock Drainfield Trench Cross-Section

TAKING CARE OF YOUR SYSTEM

Your septic system represents a significant investment worth protecting. The old adage "An ounce of prevention is worth a pound of cure" is so true when it comes to the care of your septic system. If you follow the operation and maintenance guidelines given below, your system will function better and last longer, and you will avoid the nightmare and expense of a failed system. Most important, your system will not be polluting groundwater.



Conventional Septic System

DO

- Conserve water to reduce the amount of wastewater that must be treated and disposed.
- Repair any leaking faucets and toilets.
- Discharge only biodegradable wastes into system.
- Divert down spouts and other surface water away from your drainfield.
- Keep your septic tank cover accessible for tank inspections and pumping.
- Have your septic tank pumped regularly and checked for leaks and cracks.
- Call a professional when you have problems.
- Compost your garbage or put it in the trash.

DON'T

- Use a garbage grinder.
- Flush sanitary napkins, tampons, disposable diapers, condoms and other non-biodegradable products into your system.
- Dump solvents, oil, paints, thinners, disinfectants, pesticides or poisons down the drain. These materials can disrupt the treatment process and contaminate the groundwater.
- Dig in your drainfield or build anything over it.
- Plant anything over your drainfield except grass.
- Drive over your drainfield or compact the soil in any way.

If you have a question or need additional information, contact:

Groundwater Branch
Kentucky Division of Water
Natural Resources and Environmental
Protection Cabinet
14 Reilly Road
Frankfort, Kentucky 40601
(502) 564-3410

Environmental Management Branch
Division of Public Health Protection
and Safety
Cabinet for Health Services
275 E. Main Street, HS 2E-B
Frankfort KY 40601
(502)564-4856

Check List
for
Evaluating Your Septic System

- | | |
|---|--|
| <p>1 Find and mark the location of the septic system. You should map this information in the space provided in your Groundwater Protection Plan: "Homeowner's Septic System Guide and Record Keeping Folder."</p> <p>2 When was the septic tank last pumped?
_____</p> <p>3 If the tank was last pumped over three years ago, or if you have recently moved into the house and don't know when the tank was last pumped, contact a septic tank pumper. Have him service the tank and check the baffles.</p> <p>4 Do toilets flush slowly and does water drain slowly from sinks and tubs, or does either "gurgle"?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>5 Is there any standing water, soggy ground, or smelly liquid in or near the drainfield?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>6 Does the ground slope toward the septic system?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> | <p>7 Are your septic tank and drainfield less than 100 feet from a lake, stream, or pond?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>8 Are water-loving trees such as willows, sycamores, birches, or water maples growing within 10 feet of the septic tank?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>9 Are there any areas over the septic tank or drainfield where people have frequently driven their cars or trucks?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>10 Have any additions been made to the house since the present septic system was installed?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>11 Do you have dripping faucets or a toilet that runs continuously or gradually loses water from its tank?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>12 Do you put cigarette butts, coffee grounds, cooking fats, disposable diapers, facial tissue, wet-strength towels, or other non-biodegradable materials into your septic tank?

Yes <input type="checkbox"/> No <input type="checkbox"/></p> |
|---|--|

If you have answered YES to one or more of questions 4 - 12, the septic system may not be functioning correctly. Call your local health department, or seek other professional help. Should repair of the system be necessary, be sure to engage the services of a professional who has a groundwater protection plan on file. If you have any questions, contact the Groundwater Branch, Division of Water, 14 Reilly Road, Frankfort, KY 40601 (telephone 502/564-3410) or the Environmental Management Branch, Division of Environmental Health and Community Safety, 275 E. Main St., Frankfort, KY 40601 (telephone 502/564-4856).